

## SEQUENCE LISTING

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<120> Mixed lipopeptide micelles for inducing an immune  
response and their therapeutic uses.

<130> Lipopeptides-INSERM

<140> PCT/FR 98/02605

<141> 1997-12-02

<150> FR9715246

<151> 1997-12-03

<160> 284

<170> PatentIn Ver. 2.1

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<212> PRT

<213> Clostridium tetani

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<220>

<221> LIPID

<222> (33)

<223> PALMITOYL DERIVATIVE

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Lys Ala Ala Val Asp Leu Ser His Phe Leu Lys Glu Lys Gly Gly Leu  
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Lys

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 Glu Trp Arg Phe Asp Ser Arg Leu Ala Phe His His Val Ala Arg Glu  
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 Leu His Pro Glu Tyr Phe Lys Asn Lys  
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 Gln Met Leu Lys Glu Thr Ile Asn Glu Glu Ala Ala Glu Trp Asp Arg  
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Lys

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Gly Leu Asn Lys Ile Val Arg Met Tyr Ser Pro Thr Ser Ile Leu Asp  
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Lys

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Arg Ala Phe Tyr Ala Thr Gly Glu Ile Ile Gly Asp Ile Arg Gln Ala  
                   20                  25                  30

His Lys

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<400> 9  
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Arg Tyr Pro Leu Thr Phe Gly Trp  
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Ala Phe His His Val Ala Arg Glu Leu  
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Phe Leu Lys Glu Lys Gly Gly Leu  
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Ile Asp Met Ser His Phe Ile Lys Glu Lys Lys  
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<210> 24

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<211> 24  
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<400> 25  
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 Phe Gly Trp Leu Trp Lys Leu Val Lys  
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 <221> LIPID  
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 Ser Lys Trp Asp Asp Pro Trp Gly Glu Val Leu Ala Trp Lys Phe Asp  
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 Pro Thr Leu Ala Tyr Thr Tyr Glu Ala Lys  
 20 25

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 <212> PRT  
 <213> Simian immunodeficiency virus

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<400> 27  
 Tyr Thr Tyr Glu Ala Tyr Ala Arg Tyr Pro Glu Glu Leu Glu Ala Ser  
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Gln Ala Cys Gln Arg Lys Arg Leu Glu Glu Gly Lys  
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<400> 28  
 Lys Phe Gly Ala Glu Val Val Pro Gly Phe Gln Ala Leu Ser Glu Gly  
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Cys Thr Pro Tyr Asp Ile Asn Gln Met Leu Asn Cys Val Gly Asp Lys  
           20                    25                    30

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 Gln Ile Gln Trp Met Tyr Arg Gln Gln Asn Pro Ile Val Gly Asn Ile  
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Tyr Arg Arg Trp Ile Gln Leu Gly Leu Gln Lys Cys Val Arg Met Tyr  
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Asn Pro Thr Asn Lys  
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Lys Lys

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<400> 31  
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His Ile Val Lys  
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 Ala Ile Phe Gln Ser Ser Met Thr Lys Ile Leu Glu Pro Phe Arg Lys  
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Gln Asn Pro Asp Ile Val Ile Tyr Gln Tyr Met Asp Asp Leu Tyr Lys  
                   20                  25                  30

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 <222> (31)  
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 Gly Val Arg Tyr Pro Leu Thr Phe Gly Trp Leu Tyr Lys Leu Lys  
 20 25 30

<210> 34  
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<400> 34  
 Leu Leu Ser Asn Ile Glu Glu Pro Lys Glu Asn Ile Ile Asp Asn Leu  
 1 5 10 15  
 Leu Asn Asn Ile Lys  
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<210> 35  
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 <212> PRT  
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 <221> LIPID  
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<220>  
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 <223> ACETYLATION

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<400> 35

Asp Glu Leu Phe Asn Glu Leu Leu Asn Ser Val Asp Val Asn Gly Glu  
1 5 10 15

Val Lys Glu Asn Ile Leu Glu Glu Ser Gln Lys  
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<210> 36

<211> 27

<212> PRT

<213> Plasmodium falciparum

<220>

<221> LIPID

<222> (27)

<223> PALMITOYL DERIVATIVE

<220>

<221> MOD\_RES

<222> (1)

<223> ACETYLATION

<400> 36

Leu Glu Glu Ser Gln Val Asn Asp Asp Ile Phe Asn Ser Leu Val Lys  
1 5 10 15

Ser Val Gln Gln Glu Gln Gln His Asn Val Lys  
20 25

<210> 37

<211> 33

<212> PRT

<213> Plasmodium falciparum

<220>

<221> LIPID

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1 5 10 15

Val Glu Glu Ser Val Ala Glu Asn Val Glu Glu Ser Val Ala Glu Asn  
20 25 30

Val

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<211> 9

<212> PRT

<213> Homo sapiens

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<400> 38  
 Glu Asp Ala Glu Leu Asn Pro Arg Phe  
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 <212> PRT  
 <213> Homo sapiens

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 Asp Glu Leu Glu Ala Val Pro Asn Ile  
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<210> 41  
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 <213> Homo sapiens

<400> 41  
 Lys Glu Asp Ala Leu Gln Arg Pro Val  
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<210> 42  
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 <212> PRT  
 <213> Homo sapiens

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 Glu Asp Ala Leu Gln Arg Pro Val Ala  
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<210> 43  
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<400> 43  
 Gly Glu Lys Leu Arg Val Leu Gly Tyr  
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<400> 46  
 Asn Glu Glu Ala Ala Asp Glu Val Phe  
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 Val Asn Gln Glu Arg Phe Arg Met Ile  
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<210> 48  
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<400> 48  
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<210> 49

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 Ala Arg Lys Leu Arg His Val Leu Phe  
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 <212> PRT  
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 Ala Leu Lys Ile Lys Ile Ser Gln Ile  
     1                    5

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 <212> PRT  
 <213> Homo sapiens

<400> 51  
 Cys Val Lys Leu Gln Thr Val His  
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<210> 52  
 <211> 9  
 <212> PRT  
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 Lys Ala Leu Gln Arg Pro Val Ala Ser  
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<400> 54  
 Ile Gln Gln Met Arg Asn Lys Phe Ala  
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<210> 57  
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 <213> Homo sapiens

<400> 57  
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<210> 58  
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 <213> Homo sapiens

<400> 58  
 Thr Pro Arg Arg Gln Ser Met Thr Val  
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<210> 59  
 <211> 9  
 <212> PRT  
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<400> 59  
 Ser Pro Gly Gln Arg Ser Ile Ser Leu  
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<210> 60  
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<400> 60  
 His Pro Asn Leu Val Gln Leu Leu Gly Val  
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 <213> Homo sapiens

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<210> 62  
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<400> 62  
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<210> 63  
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<400> 63  
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<400> 64  
 Glu Arg Cys Lys Ala Ser Ile Arg Arg  
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<212> PRT  
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<400> 65  
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<210> 66  
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<400> 66  
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<400> 67  
 Phe Arg Val His Ser Arg Asn Gly Lys  
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 <212> PRT  
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<400> 68  
 Leu Leu Tyr Lys Pro Val Asp Arg Val  
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<400> 70

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Gln Leu Leu Lys Asp Ser Phe Met Val  
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<400> 71  
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<210> 75  
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<400> 75  
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<210> 76  
<211> 9  
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<400> 76  
Val Leu Leu Tyr Met Ala Thr Gln Ile  
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<210> 77  
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<400> 77  
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<210> 78  
<211> 9  
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1 5

<210> 79  
<211> 9  
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<400> 79  
Asn Gln Glu Arg Phe Arg Met Ile Tyr  
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<210> 81  
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<213> Homo sapiens

<400> 81

Lys Val Pro Glu Leu Tyr Glu Ile His Lys  
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<210> 82

<211> 9

<212> PRT

<213> Homo sapiens

<400> 82

Lys Leu Ala Ser Gln Leu Gly Val Tyr  
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<210> 83

<211> 10

<212> PRT

<213> Homo sapiens

<400> 83

Met Val Glu Leu Val Glu Gly Ala Arg Lys  
1 5 10

<210> 84

<211> 9

<212> PRT

<213> Homo sapiens

<400> 84

Ile Val His Ser Ala Thr Gly Phe Lys  
1 5

<210> 85

<211> 9

<212> PRT

<213> Homo sapiens

<400> 85

Ala Thr Gly Phe Lys Gln Ser Ser Lys  
1 5

<210> 86

<211> 9

<212> PRT

<213> Homo sapiens

<400> 86

Lys Gln Ser Ser Lys Ala Leu Gln Arg

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1 5

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 <212> PRT  
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<400> 88  
 Ser Leu Ala Tyr Asn Lys Phe Ser Ile Lys  
 1 5 10

<210> 89  
 <211> 9  
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<400> 89  
 Asn Leu Phe Ser Ala Leu Ile Lys Lys  
 1 5

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 Thr Val Ala Pro Ala Ser Gly Leu Pro His Lys  
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<400> 91  
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 1 5 10

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<210> 93  
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 Lys Gln Ser Ser Lys Ala Leu Gln Arg Pro Val Ala Ser  
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<400> 94  
 Arg Val Glu Gly Asn Leu Ala Arg Val Glu Tyr  
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 Gly Ser Asp Cys Thr Thr Ile His Tyr  
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 Leu Leu Pro Glu Asn Asn Val Leu Ser Pro Leu  
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<210> 97  
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<400> 97  
 Arg Met Pro Glu Ala Ala Pro Pro Val  
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<210> 98  
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Gly Arg Trp Thr  
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<210> 129  
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<210> 140  
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<210> 145

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<400> 150  
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<210> 159  
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<212> PRT  
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<400> 161  
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<210> 163  
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<210> 164  
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<400> 164  
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<400> 166

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<210> 172  
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<210> 181

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<210> 182

<211> 9

<212> PRT

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<400> 182

Ile Tyr Gln Glu Pro Phe Lys Asn Leu

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<210> 189  
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<400> 189  
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<210> 190  
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<400> 190  
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<210> 191  
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<400> 191  
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<400> 192  
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<210> 193  
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<400> 193  
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<210> 194  
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<400> 194  
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<400> 195  
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<400> 196  
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<210> 197  
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<400> 197  
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<210> 198  
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<400> 198  
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<210> 199  
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<400> 199  
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 <212> PRT  
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<400> 200  
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<210> 201  
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<400> 201  
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<210> 202  
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 <212> PRT  
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<400> 202  
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<210> 203  
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<400> 203  
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<211> 10  
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<400> 205  
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<210> 206  
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<400> 206  
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<210> 207  
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<400> 207  
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<400> 208  
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<210> 209  
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<400> 209  
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<400> 212  
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<210> 213  
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<400> 213  
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<210> 214  
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<400> 214  
 Tyr Pro Leu Thr Phe Gly Trp Cys Phe  
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<210> 215  
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<400> 215  
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<210> 216  
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<400> 216  
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<210> 217  
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<400> 217  
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<210> 218  
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<400> 218  
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<210> 219  
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<400> 219  
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Glu Pro Ile Val Gly Ala Glu Thr Phe Tyr  
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<210> 226  
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<400> 226  
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<210> 227  
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<400> 229  
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<400> 236

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<210> 258  
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<210> 277  
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<400> 278  
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<212> PRT  
 <213> Homo sapiens

<400> 279  
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<210> 280  
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Val Thr Ser Ala  
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<213> Human papillomavirus

<400> 284

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